

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ON *SCIURUS VARIABILIS* FROM THE SANTA MARTA
REGION OF COLOMBIA.

BY OUTRAM BANGS.

Among the mammals collected by Mr W. W. Brown, Jr., in the Santa Marta region of Colombia is a fine series of twenty-four squirrels. Twenty-one of these are from the lowlands in the immediate neighborhood of Santa Marta, at an altitude of from 500 to 600 feet, and are true *Sciurus variabilis* Geoffroy.* The other three were taken in the high sierra—one at Palomina (altitude, 5000 feet) and two at Pueblo Viejo (altitude, 8000 feet), and belong to quite a different mountain race of that squirrel.

The form from the high mountain forest of the Sierra Nevada appears to be undescribed. Its differences from true *S. variabilis* are very interesting and are exactly what would be expected from the character of its surroundings. The smaller size, much duller, deeper coloration and very much smaller audital bullæ of the new form all indicate an inhabitant of the dark, dense, saturated, luxuriant mountain forest; while the large size, long tail, vivid color and large audital bullæ of true *S. variabilis* point rather to an existence spent in the dry, open, brushy forest of the burning lowlands.

**Sciurus variabilis* was described from specimens of uncertain locality, though without doubt from Colombia, as Geoffroy tells us that the collection of which these squirrels formed a part was made in North America, the West Indies, and Colombia. It therefore seems fair to regard the specimens from the lowlands of the Colombian coast as strictly typical *Sciurus variabilis*.

***Sciurus variabilis variabilis* Is. Geoffroy.**

Sciurus variabilis Is. Geoffroy, Mag. de Zool. I, plate iv, 1832.

Type locality.—Colombia (restricted here to the lowland forest about Santa Marta; altitude, 500–600 feet).

General characters.—Size rather large; ear high; colors vivid; skull large; audital bullæ large, much inflated, pappery; no small upper premolar.

Color.—(No. 8018, ♀ adult, from Santa Marta, 600 ft. altitude, apparently representing the normal phase of coloration). Upper parts—head, back, rump, about 90 mm. of basal portion of tail (above and below), and upper surface of legs orange-rufous, variegated with black—each hair orange-rufous, with a black median band; lower sides, shoulders, arms, a large patch above each shoulder nearly meeting on back, feet, hands, and rather more than the apical three-fourths of tail (all around) vivid, intense orange-rufous—the hairs without black bands; sides of head and chin brownish ochraceous; hairs of back and sides plumbeous at base; line of demarkation between colors of upper and under parts low down; under parts pure white to base of hairs, this color extending half way along under side of neck and in a narrow line a little way down under surface of leg and arm.

Variations in color.—The variations in color run in two opposite directions from the normal, caused (1) by the widening of the black median bands of the hairs of the upper parts, and (2) by the narrowing or total disappearance of the black bands—one ‘melanism,’ the other ‘erythrism.’ ? *

The darkest individual in the series (No. 8015) has all the black bands of the hairs of back and sides, those of legs and arms also being banded, much broadened, the general tone being dusky, somewhat relieved by a few rufous-tipped hairs; the tail is as usual above, but darker below. No. 8014 has no black bands at all on the hairs of the upper parts, being a uniform fiery orange-rufous above.

Five other specimens approach either one or the other of these extremes to a greater or less degree, leaving fourteen out of twenty-one examples perfectly normal, with but a minimum of color variation. The under parts of all are clear white.

Cranial characters.—Skull normal, without small upper premolar; audital bullæ large, much inflated, thin and pappery.

Size of an average old adult ♀ skull, No. 8028.—Basal length, 49.6; occipito-nasal length, 57.4; zygomatic width, 34; mastoid width, 26; interorbital width, 19.8; length of nasals, 19; length of upper tooth row, 9.6; length of mandible, 33.

(For measurements see table, p. 186.)

* See O. Thomas on color variation in *Sciurus finlaysoni*, Proc. Zool. Soc. London, 1898, p. 245.

***Sciurus variabilis saltuensis* subsp. nov.**

Type from Pueblo Viejo, Colombia (altitude, 8000 ft). No. 8144, ♀ old adult, coll. of E. A. and O. Bangs. Collected March 26, 1898, by W. W. Brown, Jr.

Subspecific characters.—Smaller than true *S. variabilis*; tail shorter; colors duller, deeper and darker; feet and hands much darker in color; no patch of clear rufous on shoulders and sides—the hairs of this region, and also those of feet, hands and lower sides, with a black median band like the hairs of the rest of upper parts; skull smaller, and more solid; audital bullæ smaller, thicker and less inflated.

Color.—Upper parts, deep, tawny-rufous varied with black—each hair plumbeous at base, then rufous with a black median band; tail much deeper in color than that of true *S. variabilis*, the hairs of its sides with a more distinct black median band; under parts clear white to base of hairs.

Cranial characters.—Skull similar to that of true *S. variabilis* but decidedly smaller and rather more solid; audital bullæ much smaller, thicker and less inflated.

Size of type skull (old adult ♀): Basal length, 46; occipito-nasal length, 54.2; zygomatic width, 31.6; mastoid width, 24; interorbital width, 18; length of nasals, 16.4; length of upper tooth row, 9; length of mandible, 30. (For measurements see table, p. 186.)

Remarks.—Mr. Brown found this mountain representative of *S. variabilis* very rare in the several places he visited in the higher Sierra and secured but three individuals: one at Palomina, May 2, 1898; and two at Pueblo Viejo, March 20 and 26, 1898. These three skins are indistinguishable in color.

Measurements.

No.	Sex and age.	Locality.	Total length.	Tail vertebræ.	Hind foot.	Ear from notch.
-----	--------------	-----------	---------------	----------------	------------	-----------------

Sciurus variabilis variabilis Is. Geoffroy.

8019	♂ old ad.	Santa Marta	500	250	53	23
8023	old ad.	" "	485	245	60	27
8011	old ad.	" "	482	250	57	25
8028	old ad.	" "	460	235	58	25
8024	old ad.	" "	467	225	55	27
8012	ad	" "	500	255	55	27
8018	ad	" "	460	230	55	26
8025	ad	" "	465	230	55	25
8022	ad	" "	470	240	56	27
8014	ad	" "	475	240	57	26
8013	ad	" "	475	240	55	26
8026	ad	" "	460	230	57	26
8030	ad	" "	450	220	53	25
8015	ad	" "	452	220	55	26
8016	ad	" "	443	215	51	27
8020	ad	" "	445	235	55	27
8010	yg. ad.	" "	460	230	56	26
8017	yg. ad.	" "	442	225	57	25
8027	yg. ad.	" "	435	220	53	25
8021	yg. ad.	" "	435	215	55	25

Sciurus variabilis saltuensis subsp. nov.

8144	♂ old ad. ...	Pueblo Viejo	420	200	54	26
8145	old ad.	" "	Head &	body 230	55	27
8244	+ ad	Palomina	410	190	52	27

NOTE.—'Old adult,' 'adult,' and 'young adult' are given in accordance with the appearance of the skull and teeth, regardless of the collector's measurements.